

#### **ABSTRACT**

**[43]** The present invention relates to graphic presentations of complex analytical data strings containing each a multitude of substance-representing peaks (e.g. mass spectra or chromatograms) and pattern recognition or classification techniques in collections of such data strings. The invention proposes to highlight, after execution of the pattern recognition or classification algorithms, the significantly participating peaks in the graphical display so that the nature of these peaks, and the substances represented by these peaks, can easily be further investigated. The content of the graphical display, particularly the peaks, can be interactively accessed by the user and by the pattern recognition programs.